CLAIMS

What is claimed is:

1   1.   A method comprising:

2   capturing an intensity at a location on a surface in a single pixel of an

3   image sensing array (ISA); and

4   converting the intensity into a measurement of distance to the location

5   relative to a reference point independently of data from other pixels of the ISA.

1   2.   The method of claim 1 wherein the ISA is a linear image sensor.

1   3.   The method of claim 2 wherein the linear image sensor is one of a

2   linear charge coupled device (CCD) and a photo diode array.

1   4.   The method of claim 1 further comprising:

2   comparing a plurality of captures of the intensity at the location under

3   different conditions to compensate for non-homogenous environments or surface.

1   5.   The method of claim 1 further comprising:

2   comparing a plurality of captures of the intensity at the location at

3   different points in time to compensate for non-homogeneous environments or

4   surfaces.

1   6.   A method comprising:

2   capturing an intensity at a location on a surface in an elementary group

3   of pixels on an image sensing array (ISA) without regard to intensity distribution

4   within the group; and

5   converting the intensity into a measurement of distance to the location

6   independently of data from other pixels on the ISA.

1   7.   The method of claim 6 wherein the ISA is a linear image sensor.

1   8.   The method of claim 7 wherein the linear image sensor is one of a

2   linear charge coupled device (CCD) and a photo diode array.

1   9.   The method of claim 6 further comprising:

2   comparing a plurality of captures of the intensity at the location under

3   different conditions to compensate for non-homogenous environments or surfaces.

1   10.   The method of claim 6 further comprising:

2   comparing a plurality of captures of the intensity at the location at

3   different points in time to compensate for non-homogeneous environments or

4   surfaces.

1   11.   A method comprising:

2   capturing a spectral energy distribution returned from a location on a

3   surface in a single pixel of an ISA; and

4   converting the spectral energy distribution into a measurement of

5   distance to the location relative to a reference point independently of data from

6   other pixels of the ISA.

1   12.   A method comprising:

2   altering one of a spatial and optical relationship between an image

3   sensing array (ISA) and a surface;

4   observing a variation of an electrical signal at a single pixel on the ISA

5   responsive to the alteration; and

6   converting the variation to a measure of distance to a location on the

7   surface relative to a reference point, independently of data from other pixels of the

8   ISA.

1   13.   A method comprising:

2   altering one of a spatial and optical relationship between an image

3   sensing array (ISA) and a surface;

4   observing a variation of an electrical signal at an elementary group of

5   pixels on the ISA without regard to variations in electrical signals within the group

6   responsive to the alteration; and

7   converting the variation to a measure of distance to a location on the

8   surface relative to a reference point, independently of data from other pixels of the

9   ISA.